

**THE UNITED STATES DISTRICT COURT
FOR THE MIDDLE DISTRICT OF NORTH CAROLINA**

UNITED STATES OF AMERICA,)
)
Plaintiff,)
)
ENVIRONMENTAL DEFENSE,)
NORTH CAROLINA SIERRA CLUB, and)
NORTH CAROLINA PUBLIC INTEREST)
RESEARCH GROUP)
)
Plaintiff-Intervenors,)
)
v.) Civil Action No. 1:00 CV 1262
)
DUKE ENERGY CORPORATION)
)
Defendant.)

**Plaintiffs' Response to Duke's Supplemental Memorandum on the Plant
Modernization Program Claims**

TABLE OF CONTENTS

I.	Duke Never Sought an Alternate Baseline, But if it Had it Would Have Been Zero	1
II.	Duke's Causation Argument is Contrary to the Evidence.....	5
III.	Duke Has Fallen Far Short of Meeting its Routine Maintenance Burden.....	7

Duke's PSD baseline, causation, and routine maintenance contentions are contrary to the law and the facts, and insufficient to avoid summary judgment.¹

I. Duke Never Sought an Alternate Baseline, But if it Had it Would Have Been Zero

Duke's threshold regulatory argument is a straw man. Rather than respond to the argument Plaintiffs made, Duke says Plaintiffs' argument turns on a supposed claim that the word "immediately" appears in the PSD rules, and then points out that the word "immediately" is not in the rules. ECF 453, at 6. But what Plaintiffs said, and what Duke nowhere refutes, is that EPA historically presumed under the applicable 1980 rules that the two-year period immediately preceding a change should be used,² unless a source seeks a specific "determination" that an alternate baseline should be allowed. Pls. SJ Br. (ECF 435), at 22-24; Pls. Reply (ECF 439), at 4-5. Duke never sought a "determination" for its modernizations, and this Court can and should hold that the presumptive baseline applies. *U.S. v. Ohio Edison Co.*, 276 F. Supp.2d 829, 864, 881 (S.D. Ohio 2003).

On the issue of regulatory interpretation, Duke says EPA guidance requires a non-zero baseline. ECF 453, at 4-5. Yet Duke ignores decades of guidance saying the exact opposite. In a string of guidance from before, during, and after the PMP, EPA rejected

¹ The parties appear to agree about the basic answers to the three questions posed by the Court on May 3, even if they dispute the ultimate consequences of the answers. The thirteen PMP claims share many common facts, but each was an individual modification. None of the modifications were routine maintenance. And the same baseline analysis applies to each claim because each unit was shut down for more than two years.

² *New York v. EPA*, 413 F.3d 3, 22 (D.C. Cir. 2005); *see* 45 Fed. Reg. 52,718 (Aug. 7, 1980) (announcing presumption); *see also Envil. Def. v. Duke Energy Corp.*, 549 U.S. 561, 569 (2007) (increase "above the actual average for the two prior years").

requests for alternate baselines for units like Duke's, instead requiring a zero baseline so as to assess *actual* emission increases resulting from modifying shut down sources. Pls. SJ Br. (ECF 435), at 24-28; Pls. Reply (ECF 439), at 5-8. Duke ignores the 1987 *Casa Grande* matter, which required a zero baseline precisely *because* non-emissions "during the two-year period preceding start-up" of a renovated plant were most "representative of normal source operations." Pls. Ex. 32 (ECF 435-33), at 8. And the *Northshore* determination that a pre-shutdown period was *not* "representative of normal operations in any realistic sense," given the source's recent non-operation. Pls. Ex. 44 (ECF 435-45), at 8. And EPA's 1992 refusal to *change* the PSD rules to allow idled plants to use pre-shutdown operations for their baseline. 57 Fed. Reg. 32,325 (July 21, 1992). As EPA explained there, shifting to pre-shutdown periods would be contrary to regulatory language requiring PSD baselines to be "contemporaneous" with the change in question, and would artificially inflate pre-change emissions. *Id.* And the 1999 *Monroe Electric* matter, which held that a "zero emissions baseline is representative of normal operations" for a shutdown plant, because the baseline must be representative of how the plant was *actually* operating prior to being renovated. Pls. Ex. 49 (ECF 436-7), at 16, 25-26.³

³ Duke's claim that *Monroe Electric* is anomalous is easily disproved; EPA applied the same analysis in *Monroe Electric* as it had applied in *Casa Grande* and the other guidance discussed above. *Id.* at 16. Duke's selective reading of WEPCo is also unconvincing. There, the source's baseline analysis was based on the entire five-unit plant's aggregate emissions, and the plant as a whole *had* been operating during the baseline period. Pls. Ex. 42 (ECF 435-43), at Encl. A. Moreover, contrary to Duke's claim, when EPA analyzed emissions on a unit-by-unit basis, it specifically *did* use a zero baseline for the one shut down unit. Pls. Ex. 28 (ECF 435-29), at Encl. B; *see also* Pls. Reply (ECF 439), at 7 & n.6.

Duke fails to acknowledge the effect of this guidance, instead pointing to materials that have nothing to do with the required “modification” analysis. ECF 453, at 4-5. For instance, the 1978 Portland letter Duke cites (Def. Ex. 110) was issued two years before the applicable 1980 “modification” rules were even promulgated. And the Watertown letter has nothing to do with the “modification” test either. It dealt with EPA’s separate “reactivation” policy, under which a plant that is merely turned back on will be considered “new,” regardless of whether it was “modified,” simply if the company intended the prior shutdown to be “permanent.” Def. Ex. 58; *see* Pls. Ex. 49 (ECF 436-7), at 8-20 (modification analysis is different than reactivation analysis; plant can be modified even if a shutdown is not deemed permanent under reactivation policy); Pls. Ex. 32 (ECF 435-33), at 1-3. This enforcement action is not about the reactivation policy. Plaintiffs seek summary judgment that Duke “modified” its plants, not that they were “new” under the reactivation policy, which would require resolving the disputed issue of whether Duke intended the shutdowns to be “permanent.” Summary judgment is compelled under the applicable *modification* test.

Duke also suggests North Carolina said pre-shutdown operations should be used to evaluate each of the PMP projects. ECF 453, at 5. This is contradicted by the record, including by the very correspondence Duke cites. Though Duke cites a document it refers to as the “NC PMP Letter,” a review of the letter reveals that is not the document’s title, that the letter was written in 1983, two years before the PMP even existed, and that Duke said nothing about any of the modernizations that it actually undertook. Pls. Opp.

(ECF 436), at 6-8, 21-22. North Carolina said nothing about the PMP baseline, let alone that it was exempting any modernizations from PSD.⁴

Finally, Duke suggests it lacked notice that its modernizations could be considered modifications. Even if that assertion were relevant to Duke's liability (it is not; Pls. Opp. (ECF 436), at 11 n.15), it is contrary to the record. Duke closely monitored *WEPCo* and understood the risks associated with the PMP; it developed a strategy to address its "risk" and even advised another utility to avoid using phrases like "life extension" given what had happened with *WEPCo*. *Id.* at 9-11; *see also* Ex. 15 to Doc. No. 263, at MAP01253.

Ultimately, Duke's arguments are a diversion from the real issue. Several years *after* its 1983 decision to put certain units in "ECS," Duke decided to modernize them. It then established the PMP, undertook life extension studies to identify necessary work, and modified the thirteen units at issue. Pls. Supp. (ECF 454), at 3-5, 6-17. Duke could have sought an applicability determination at that point (like *WEPCo* did). It chose not to. But even if Duke had sought such a determination, the record overwhelmingly confirms that a zero baseline would have applied under the PSD rules and EPA guidance.

Moreover, a zero baseline is compelled by common sense here. The purpose of Duke's modernizations was to revive units that had emitted nothing for years and that otherwise would have been replaced with new (and thus PSD-compliant) capacity. Pls.

⁴ Duke's suggestion that North Carolina had a "policy" that would have used prior baselines is also wrong. There was no policy. Indeed, even the *post hoc* hearsay Duke cites was from well after the PMP, and is thus given "no weight" under Fourth Circuit precedent. *Id.* at 22 n.21. It also had nothing to do with the PMP, and even if it had, it could not contradict the *actual* written policy guidance discussed above. *Id.* at 22-28.

Supp (ECF 454), at 4; Pls. SJ Br. (ECF 435), at 7-8. PSD is a technology-forcing law that requires “modified” sources to install the same modern pollution controls as new sources; of course grandfathering should end when a deteriorated unit is modernized as a substitute for building new capacity. *Wis. Elec. Power Co. v. Reilly*, 893 F.2d 901, 909-10 (7th Cir. 1990) (“development of emissions control systems is not furthered if operators could, without exposure to [PSD], increase production (and pollution) through the extensive replacement of deteriorated generating systems”).

II. Duke’s Causation Argument is Contrary to the Evidence

PSD was triggered if Duke should have expected its projects to result in actual annual emissions increases. *United States v. Duke Energy*, 2010 WL 3023517, at *5 (M.D.N.C. July 28, 2010) (calculus includes increases “caused or enabled” by projects). The record overwhelmingly confirms this was the case. Duke’s units deteriorated to such an extent that they were shut down and subsequently placed in a “Plant Modernization Program,” the purpose of which was to “increase our system generating capability” by upgrading the units “so that they operate safely, reliably, and cost effectively for an additional 20 years.” Pls. Ex. 5 (ECF 435-6); Pls. Ex. 8 (ECF 435-9), at 2ARCH001134. Duke told FERC, the North Carolina Utilities Commission (NCUC), and its own employees that the projects were “necessary” and “required” in order to make the units reliable; that a “comprehensive” renovation was the “only way” to bring the units back online as a reliable source of capacity; that the units “cannot provide reliable service until major repairs can be performed”; and that the PMP effectively added “new capacity” by

extending the lives of units that otherwise “would have been retired.” Pls. SJ Br. (ECF 435), at 7-11; Pls. Reply (ECF 439), at 9-10; Pls. Supp. (ECF 454), at 3-5.

Duke ignores this evidence, instead suggesting the NCUC did not agree that the PMP was necessary. ECF 453, at 7-8. But as noted above, the inquiry is whether *Duke* should have expected its projects to increase emissions. The record on that is clear. In any case, Duke’s suggestion about the NCUC is inaccurate. Duke cites what Duke’s *opponents* said; the NCUC itself concluded that “[i]t is clear to the Commission that these units cannot provide reliable service until major repairs can be performed which will take a number of years.” Pls. Opp. (ECF 436), at 20 n.20; *State ex rel. Utils. Comm’n v. Eddleman*, 358 S.E.2d 339, 349 (N.C. 1987). Duke also points out that the NCUC said it was prudent to shut the units down before they became so damaged that they “cannot be rehabilitated” at all. ECF 453, at 8. But the fact that Duke shut the units down within a hair’s breadth of destroying them for good does not mean that the PMP was unnecessary. Indeed, it suggests – as Duke said at the time and as the NCUC held – just the opposite.

At bottom, Duke’s causation argument boils down to a meaningless tautology. Duke says summary judgment is inappropriate because each unit was operating before it stopped operating. ECF 453, at 8-9. But that irrelevant and circular contention, which would be true by definition of *any* source that once operated, sheds no light on whether Duke’s modernizations were necessary for the units to *return* to operation.⁵ After the

⁵ Ironically, Duke’s submission of operating data to “demonstrate” that each unit had operated before it stopped operating (Def. Ex. 116) provides the Court with an alternate basis for granting summary judgment for Plaintiffs on many of the claims. Even Duke’s

units were shut down, Duke spent months evaluating the condition of each unit and identifying the specific repairs necessary to return the units to service. Pls. Supp. (ECF 454), at 3-17. The results of that effort resulted in the modifications at issue, which allowed Duke to turn old, deteriorated plants into new capacity for its system.⁶

III. Duke Has Fallen Far Short of Meeting its Routine Maintenance Burden

As an initial matter, Duke's brief reveals that it is relying on a demonstrably incorrect premise that undercuts its entire routine maintenance argument. It asserts that the individual replacements at each unit were unrelated to each other such that, for example, the waterwalls, superheater, reheater, and economizer renovations at Dan River 3 should be considered four "separate projects" for purposes of evaluating the *WEPCo* factors. ECF 453, at 12-13. There is no evidence to support this assertion. Duke simply cites its own litigation statements, and those statements are contradicted by the record. Pls. Ex. 69 (ECF 439-2) (consolidating *all* of the above work into one authorization for

data show that capacity factor (a measure of generation) went up in many cases as compared to the average of the two pre-shutdown years. In cases where it did not (*e.g.*, Allen 1), Plaintiffs contend that is because Duke improperly truncates the post-project period. *Compare* Def. Ex. 116, at Allen 1 (29.5% post-project capacity factor in 1994) *with* Pls. Ex. 8 (ECF 435-9), at 2ARCH001143 (PMP predicted a 49% factor in 1998); *see* Pls. SJ Br. (ECF 435), at 30 n.37; Pls. Opp. (ECF 436), at 29 & n.28. However, the Court need not wade into disputes about capacity factors, because there is no dispute that emissions increased as compared to a zero baseline. Pls. Supp. (ECF 454), at 2 n.3.

⁶ Duke also argues that Plaintiffs' expert testimony on causation cannot be considered because it was supposedly undisclosed. This is a red herring. Duke's *own* documents establish that the PMP was expected to cause emission increases. In any case, Duke is wrong. Mr. Koppe's causation opinion was disclosed pursuant to Rule 26, and Duke has never challenged it. Pl. Opp (ECF 436), at 20. Moreover, even if it were necessary to disclose opinions twice, as Duke illogically suggests, Plaintiffs' emissions expert disclosed his reliance on Mr. Koppe. *E.g.*, Def. Ex. 40 at 17 n.36; Def. Ex. 41 at 34 n.31.

Dan River 3); Pls. Ex. 72 (ECF 454-4) (Dan River 3 treated as a single PMP project); Def. Ex. 56 (ECF 431-13) (similarly aggregating work at each of the units); Pls. Ex. 8 (ECF 435-9), at 2ARCH0001141 (same); Pls. Supp. (ECF 454), at 3-17 (detailing facts).⁷

Then, in an attempt to further minimize the apparent scope of each modernization, Duke subtracts all non-boiler work from its analysis (*e.g.*, feedwater heaters, controls, turbine-generators), even though there is no dispute that such work was actually done.⁸ It then compares, in separate tables appended to its brief, just its own boiler components to the *entirety* of the work performed on *multiple* boiler *and* non-boiler components at *all five* units in *WEPCo*.⁹ Duke's counter-factual attempt to disaggregate and limit its own work and then compare it to the *entirety* of the boiler and non-boiler work at *WEPCo*'s five units renders its whole routine maintenance analysis meaningless.

In addition to being factually inaccurate, Duke's reasoning is logically flawed. To support its *WEPCo* comparisons, Duke says the nature of *all* "repair and replacement"

⁷ Even if Duke *could* show that the replacements were separate projects, EPA's routine maintenance guidance requires consideration of the overall context in which work is done. Pls. Ex. 32 (ECF 435-33), at 6. *WEPCo*, in which EPA evaluated the entirety of a utility's life extension efforts, is a prime example. Pls. Ex. 26 (ECF 435-27).

⁸ Duke's suggestion (ECF 453, at 19) that it may have lacked legally sufficient notice that this case was about anything other than boilers is contradicted by, *inter alia*, its own interrogatory responses identifying feedwater heaters, controls, turbines, and generators as among the work performed during each outage. Pls. Ex. 24 (ECF 435-25), Ex. 70 (ECF 454-2), Ex. 71 (ECF 454-3). It is also contrary to the law, which views the sufficiency of "notices of violation" liberally. Pls. Reply (ECF 439), at 15 n.19.

⁹ Compare Duke Exs. 123-136 (disaggregated boiler projects) with Pls. Ex. 26 (ECF 435-27), at 4 (*WEPCo* replaced numerous major components at five units, including boiler components as well as mechanical and electric systems and other plant support facilities).

activities at boilers includes work done on pressure parts during outages, and that it is established business practice to perform such work after extensive planning, while incorporating design improvements, using capital or O&M budgets. ECF 453, at 15-17.

Even taking Duke's assertions at face value, Duke fails to indicate how one might distinguish between routine and non-routine work under its framework. As the *U.S. v. SIGECO* court pointed out, "EPA did not exempt 'repair, maintenance and replacement'; it exempted '*routine* repair, maintenance and replacement.'" 245 F. Supp. 2d 994, 1009 (S.D. Ind. 2003) (emphasis in original). Urging that the PMP projects fall within the common category of all "repair or replacement" projects does nothing to establish that the nature of the PMP projects was *routine*. Under Duke's rubric, "all projects that are properly and extensively planned would be routine" even though "common sense dictates that when you do something routine you do not need extensive planning and approval."

U.S. v. La. Gen., 2012 WL 4107129, at *6 (M.D. La. Sept. 19, 2012).¹⁰ Similarly, Duke's claim that *capital* improvements are routine because *all* work is performed under "capital and O&M budgets" sheds no meaningful light on the nature of the work. *Id.* *7.

The fallacy in Duke's "purpose" analysis is also apparent. Duke says the purpose of all boiler "repair or replacement" work is to "improve component performance" so as to maintain "safety, reliability, and efficiency." ECF 453, at 15. But even if true, that "is

¹⁰ Contrary to Duke's claim, multi-factored evaluations are not immune from summary judgment. *E.g., id.* at *6; *U.S. v. Cinergy Corp.*, 495 F. Supp.2d 909 (S.D. Ind. 2007); *see George & Co. v. Imagination Entertainment Ltd.*, 575 F.3d 383, 392-400 (4th Cir. 2009) (affirming summary judgment on multi-factor trademark infringement test).

clearly different from” the analysis in *WEPCo*, and does nothing to separate routine from non-routine work. *La. Gen.*, 2012 WL 4107129, at *8; *see* Pls. Ex. 26 (ECF 435-27).

Duke’s discussion of the frequency of the PMP projects is similarly bereft of relevant analysis. Duke does not dispute the once-in-a-lifetime nature of the PMP at each unit, or that EPA and the Seventh Circuit held that once or twice in a lifetime projects were non-routine. Instead, Duke generically says the replacement of boiler parts is performed “commonly in the industry.” ECF 453, at 18. But even accepting this as true, Duke fails to identify any projects that were actually similar to the thirteen PMP projects, let alone that were similar and actually considered “routine.” Pls. SJ Br. (ECF 435), at 16; Pls. Reply (ECF 439), at 14 & n.18. Similarly, while it claims that individual boiler parts are replaced more than once in the life of a boiler, it makes no attempt to compare its projects to such unidentified projects in any meaningful way.

Finally, Duke presents a meaningless comparison to the costs in *WEPCo*. ECF 453, at 19. It compares *just* its boiler projects at individual units to WEPCo’s *total* cost for *five entire* units, including multiple boiler components *and* mechanical, electrical, and support systems at all five units. *Supra* note 9. Such a self-serving approach, by design, results in a skewed comparison with no resemblance to the analysis in *WEPCo*. Indeed, it bears no resemblance to how Duke itself accounted for the costs. *Compare* Def. Ex. 132 *with* Pls. Ex. 72 (ECF 454-4) (Dan River 3 memo aggregating *all* work, totaling “\$22.9 million” or “\$155/KW”). By any fair comparison, Duke’s projects, like *WEPCo*’s were “far from” routine. Pls. SJ Br. (ECF 435), at 13-18; Pls. Supp. (ECF 454), at 18-20.

DATED: June 7, 2013.

Respectfully Submitted,

IGNACIA S. MORENO
Assistant Attorney General
Environment and Natural Resources
Division
United States Department of Justice

/s/ Jason A. Dunn

JASON A. DUNN
RICHARD M. GLADSTEIN
JAMES A. LOFTON
ELIAS QUINN
Environmental Enforcement Section
Environment and Natural Resources
Division
P.O. Box 7611
Washington, D.C. 20044-7611
(202) 514-1111
jason.dunn@usdoj.gov

OF COUNSEL:

ELLEN ROUCH
Associate Regional Counsel
U.S. EPA, Region 4
61 Forsyth Street, S.W.
Atlanta, Georgia 30303

SEEMA KAKADE
Attorney Advisor
Air Enforcement Division
Office of Enforcement and
Compliance Assurance
U.S. EPA
1200 Pennsylvania Ave., N.W.
Washington, D.C. 20460

Gill P. Beck
Assistant U.S. Attorney
NCSB # 13175
P. O. Box 1858
Greensboro, NC 27402
(336) 333-5351

J. BLANDING HOLMAN, IV
N.C. Bar No. 23184
Counsel for Plaintiff-Intervenors
Environmental Defense et al.
Southern Environmental Law Center
200 W Franklin Street, Suite 330
Chapel Hill, North Carolina 27516
(919) 967-1450

CERTIFICATE OF SERVICE

I hereby certify that on June 7, 2013, the foregoing Response to Duke's Supplemental Brief was filed electronically using the Court's ECF system and automatically served through the Court's ECF system on counsel of record.

/s/ *Jason A. Dunn*

Jason A. Dunn